

ENVIRONMENTAL IMPACT ANALYSIS  
PROPOSED MINING PLAN  
P-10 UNDERGROUND URANIUM MINE  
VALENCIA COUNTY, NEW MEXICO

Confidential Claim Retracted

Authorized by: SC

Date: 6/26/13

LAGUNA TRIBAL  
LEASE No. 4

PROPOSED ACTION

The proposed action consists of a mining plan submitted under the provisions of 30 CFR Part 231.10 of the Federal regulations by the Anaconda Company on April 4, 1973. The plan is for an underground uranium mining operation near the southern end of the company's Paguate open-pit mine on Laguna Tribal lease No. 4. Scheduled to start mining ore July 1, 1974, the 500 to 750 tons per day operation should be completed sometime in 1977.

~~A multilayered series of many small, south-trending tabular ore bodies lie within the Jackpile unit of the Jurassic Morrison Formation at depths of about 200 to 400 feet below the land surface. They extend southerly from the Paguate pit crest limit for a distance of nearly 1/2 mile. Since the estimated ore reserve is too small to justify the cost of open-pit mining, they will be developed through three vertical shafts and a tracked main haulage level. Ore extraction will be accomplished through raises and a modified room and pillar method.~~

Location and Natural Setting

~~The involved lands include about 58 acres within sections 4 and 5, T. 10 N., R. 5 W., NMFM, Valencia County, New Mexico. They are located in the Laguna Mining District about 8.5 miles north of Laguna, New Mexico, on the Laguna Indian Reservation. The tract is situated on the northeasterly sloping flank of the high ridge near the head of Oak Canyon at elevations ranging from 6,200 to 6,575 feet above sea level. State Highway 279, which borders the northeast corner of the tract, also passes through the Laguna Indian village of Paguate about 1 mile to the north.~~

The climate is semiarid, the annual precipitation ranging from 4 to 18 inches and averaging about 9 inches per year. The summers are generally hot, the winters moderately cold and the mean yearly temperature is about 53° F.



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The steeply sloping tract is cut by several dry washes tributary to nearby Oak Canyon Creek and intermittent Paguete River. Its rough, boulder strewn surface supports a moderate, but scattered growth of native grasses and desert shrubs studded by numerous juniper trees. Past exploration and development drilling activities have impressed the area with many drilling sites and a network of access roads.

The only use made of the entire leased area is for mining purposes. It is fenced, posted and closed to any other use owing to the hazards created by the mining operations.

#### Effects on the Environment

The probable impact of the proposed mining plan on the environment is minor. Its only adverse effect of any consequence will be the temporary destruction of the vegetation on about 14 acres of the tract from the construction of surface plant facilities, shaft sites and waste dumps.

However, the plant sites and waste dumps will be terraced, contoured and revegetated as soon as practicable. Also, upon completion of operations, all remaining denuded areas will be revegetated, and all mine openings will be sealed according to USGS specifications.

#### Alternatives to the Proposed Action

The only alternative to the plan would be to refrain from exploiting the ore bodies. This substitute, presuming it could be legally accomplished, would result in an undesirable reduction of the Tribal income.

No other feasible mining method or modification of the proposed method would reduce the possible damage to the environment. Any form of open-pit mining would disturb a much greater area of the land surface, and any modification of the planned method would affect only the underground conditions. Although surface disturbance could be reduced by disposing of mine waste rock in worked-out parts of the Paguete or Jackpile pits, the additional haulage costs would unjustifiably lower the income of both the lessor and the lessee.

#### Unavoidable Adverse Environmental Effects

The possibility of any significant amount of air pollution is remote because of the absence of any sizable contributory sources in either

the surface plant installations or the underground operations. Road dust from ore and waste haulage on the surface will be allayed with truck-mounted water sprinklers. Radioactive and particulate materials in the underground atmosphere will be satisfactorily removed by an efficient ventilating system and harmlessly dissipated at the surface.

The mine workings will be above the major surface drainage features, and past drilling results indicate the absence of ground water well below them. Any introduced water will be pumped to the two sealed settling ponds and evaporated. The site for the two sealed sewage lagoons is adjacent to State Highway 279, but state approved relocation of the highway in the near future will separate them by a distance of about  $\frac{1}{2}$  mile. Bacterial action will prevent offensive odors, and evaporation will eliminate effluent overflow. Periodic inspection by the State Public Health and Sanitation Department is mandatory.

A geologic review of the plan did not disclose any geologic hazards. The intended methods of ground support should be adequate to prevent surface subsidence above the underground workings. However, mined-out areas will be waste-filled if necessary to prevent excessive caving.

Mortality of the small number of native wildlife species such as rabbits, rattlesnakes and quail displaced by the surface activities should be very low.

No unusual health and safety problems are expected in any phase of the operations.

Nearby Pagate village and its inhabitants should not be affected by the mining operations, nor should the tribal economy be changed since the ore, therefrom, is needed to maintain the present production schedule.

#### Recommendations

From the foregoing, and in the absence of any adverse comments or controversial issues, it is concluded that the proposed action should not be considered as a major Federal action. Accordingly, it is recommended that it be determined that the plan does not constitute a major Federal action significantly affecting the quality of the human environment in the sense of NEPA, Section 102(2)(c).

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# SUMMARY OF ENVIRONMENTAL IMPACT EVALUATION

## PROPOSED ACTION

		Construction	Pollution	Exploration or Mining	Transport Operations	Accidents	Other
		Roads, bridges, airports, railroads Transmission lines, pipelines Dams and impoundments Structures (mine buildings, etc.) Others Burning, noise, dust Liquid effluent discharge Solid waste control and disposal Others (toxic gases, noxious gases, etc.) Exploration (drilling, trenching) Surface Excavation (tunnel, stripmining, etc.) Storage (product, waste, spoil) Mineral processing (ext. facilities) Others			Trucks, railroads Pipelines, conveyors Others	Spills and leaks, explosions Landslides Operational failure	
Existing Conditions:							
Land Use	Forestry						
	Grazing						
	Wilderness						
	Agriculture						
	Residential - Industrial						
	Mineral Extraction			/			
	Oil and Gas						
	Recreation						
	Scenic Views						
	Parks, Reserves						
	Monuments						
	Historical Sites						
	Unique Physical Features						
Phy. Charact. Flora & Fauna	Birds						
	Land Animals						
	Fish						
	Endangered Species						
	Trees, Grass, Etc.	/	/	/	/	/	/
	Surface Water			/	/	/	/
	Underground Water		/	/	/	/	/
	Air Quality	/	/	/	/	/	/
	Erosion			/	/	/	/
	Other						
	Effect on Local Economy			/	/	/	/
	Safety and Health			/	/	/	/
	Others						